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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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06/13/2006

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EXAMINER

STERRETT, JONATHAN G

ART UNIT

PAPER NUMBER

3623

DATE MAILED: 06/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/887,969

Applicant(s)

GHAISAS ET AL.

Examiner

Jonathan G. Sterrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Requirement for Information Under 37 C.F.R. 1.105***

1. Applicant and the assignee of this application are required under 37 CFR 1.105 to provide the following information that the examiner has determined is reasonably necessary to the examination of this application.

2. The information is required to identify any products and/or services of the applicants or assignee (i2) embodying the disclosed subject matter of a method for providing resource capacity collaboration to customers. The Examiner upon conducting a search for prior art, discovered press releases and published information contained both in the prior art (see the Transportation & Distribution article on I2's Collaborative Planning Forecasting and Replenishment offering, Rhythm) and in the assignee of record's website ([www.I2.com](http://www.I2.com)) that different supply chain collaboration offerings were for sale by the assignee.

One offering by I2, "TradeMatrix™" is disclosed in a October 99 press release. TradeMatrix is disclosed as providing "real time integration with back-end fulfillment processes" and "multiple options for consolidating orders across many vendors".

Another offering by I2, "Rhythm" is disclosed in a November 1999 press release as providing "a new forecasting and demand planning system for integrated rapid response supply chain planning from customers through suppliers".

Another article on Tradematrix™, published in March of 2000, describes the customer as having visibility throughout the entire supply chain and “a greater ability to share forecasts” (i.e. demand planning).

All of the above referenced publications and websites were published in English more than a year prior to the date for the instant application. The offerings noted above were on sale by the assignee of the instant invention more than a year before the filing date (June 22, 2001).

Independent claims 1, 15 and 29 cite limitations where the customer has access to the internal demand planning processes as described by the above articles.

In response to this requirement please provide any known publications, brochures, manuals, marketing presentations/materials and press releases that describe the I2 collaborative planning offerings that are described by cited art and specifically what product or service was marketed or developed that was the subject of the disclosures. Please provide any information (emails, presentations, etc.) related to any joint ventures, as disclosed in the cited prior art, between I2 and other firms, where a collaborative supply chain offering was produced and marketed, where this information is related to the patentability of the instant application.

In response to this requirement, please provide the citation and a copy of each publication which any of the applicants authored or co-authored and which describe the

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disclosed subject matter of customer-oriented supply chain demand management collaboration.

In response to this requirement, please provide the citation and copy of each publication that is a source used for the description of the prior art in the disclosure. For each publication, please provide a concise explanation of that publication's contribution to the description of the prior art.

In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to develop the disclosed subject matter that describes the applicant's invention, particularly as to developing a supply chain resource capacity collaboration for customers. For each publication, please provide a concise explanation of the reliance placed on that publication in the development of the disclosed subject matter.

In response to this requirement, please provide the citation and a copy of each publication that any of the applicants relied upon to draft the claimed subject matter. For each publication, please provide a concise explanation of the reliance placed on that publication in distinguishing the claimed subject matter from the prior art.

In response to this requirement, please provide the names of any products or services that have incorporated the claimed subject matter.

In response to this requirement, please provide the names of any products or services that have incorporated the disclosed prior art either utilized in, or resulting from, joint ventures as noted by the press releases of the joint ventures between the assignee and other firms.

3. The fee and certification requirements of 37 C.F.R. 1.97 are waived for those documents submitted in reply to this requirement. This waiver extends only to those documents within the scope of this requirement under 37 C.F.R. 1.105 that are included in the applicant's first complete communication responding to this requirement. Any supplemental replies subsequent to the first communication responding to this requirement and any information disclosures beyond the scope of this requirement under 37 C.F.R. 1.105 are subject to the fee and certification requirements of 37 C.F.R. 1.97.

4. In responding to those requirements that require copies of documents, where the document is a bound text or a single article over 50 pages, the requirement may be met by providing copies of those pages that provide the particular subject matter indicated in the requirement, or where such subject matter is not indicated, the subject matter found in applicant's disclosure.

5. The applicant is reminded that the reply to this requirement **must be made with candor and good faith** under 37 CFR 1.56. Where the applicant does not have or cannot readily obtain an item of required information, a statement that the item is

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unknown or cannot be readily obtained will be accepted as a complete response to the requirement for that item.

6. This requirement is subject to the provisions of 37 C.F.R. 1.134, 1.135 and 1.136 and has a shortened statutory period of 2 months. EXTENSIONS OF THIS TIME PERIOD MAY BE GRANTED UNDER 37 CFR 1.136(a).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS 5-24-2006

JGS



TARIQ R. HAFIZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3600



### DETAILED ACTION

1. This **Non-Final Office Action** is responsive to applicant's amendment filed March 23, 2006.

Currently **Claims 1-48** are pending.

2. This **Office action** has an attached requirement for information under **37 C.F.R. § 1.105**. A complete response to this Office action **must include** a complete response to the attached requirement for information. The time period for reply to the attached requirement coincides with the time period for reply to this Office action.

### *Response to Arguments*

3. The applicant's arguments with regards to the 102(b) rejections based on Koski have been fully considered but they are moot in view of new grounds of rejections, as necessitated by amendment. The remaining arguments are not persuasive.

4. The applicant argues that the customer in Koski has no visibility into the supply chain.

The examiner respectfully disagrees.

The customer has visibility into the supply chain because Koski teaches that the customer is provided rescheduling alternatives from which to choose (see column 22 line 55-60) This clearly meets the limitation of allowing a user associated with the customer to reassign the demand with a second resource

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and a second period, because the demand is being shifted to a different schedule and using different resources. The contention that the customer has no visibility into the supply chain is not borne out at least by the teaching of Koski that alternatives are presented to the customer for this rescheduling. Indeed, in line with Koski's teaching that rescheduling is a fact in operations with the indeterminate variables affecting production day to day, the customer is an essential part of Koski's teaching, i.e. they are part of the loop taught by Koski (see column 13 line 65-67, here Koski teaches that customers and suppliers both are part of the cube world, where the rescheduling according to resources/workspace/schedule is performed).

As noted below, Koski teaches that there is a need to dynamically reschedule the production of items that are ordered by a customer. The reason for this rescheduling is the stochastic, dynamic environment that production operations exist in where items are not always or cannot always be produced according to a fixed schedule. This sometimes results in either extra production capacity or insufficient capacity because of this variation (see column 2 line 27-32). The scheduling discussed by Koski takes into account resources. Those resources are described by Koski as being raw material requirements (e.g. parts, feedstock to make parts) and manufacturing capabilities (see column 3 line 5-10 – here the resource requirements are defined as being two dimensional along the material required and manufacturing capability). Furthermore, Koski notes in Column 4 line 24-30, that resources include both workspaces (i.e. the physical location where a raw material is processed, e.g. a machining center) raw

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materials (e.g. feedstock as noted above) and the people to perform the actual processing step at the workspace where the raw material is transformed into a finished part (finished insofar as that part of the manufacturing operation is concerned).

5. The applicant argues that Koski does not teach “assessing an assignment of an items used in producing a product for a customer for a first resource of a factory, associated with a supplier, in a first production period.”

The examiner respectfully disagrees.

This limitation is exactly what Koski teaches, because as noted above, the cube world rescheduling of production orders (i.e. producing a product for a customer) assesses the schedule, where the schedule is comprised of resources (assignment of resources, i.e. to make a product – Koski teaches raw materials, which are an assigned to product specific parts in his scheduling process). See column 14 line 45-50 where the resources to be used are defined as materials required. See additionally column 17 line 58-62 where resources defined in Koski’s system include materials (i.e. items used in producing a product).

6. The applicant argues that Koski does not teach “assessing a demand value”.

The examiner respectfully disagrees.

This limitation is taught in Koski in that customer orders that are rescheduled (as discussed above) are accessed to perform the rescheduling.

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Customer orders are demand values because they represent a demand place on the cube world of Koski of resources/workspaces/schedule (see column 14 line 55-60 for a discussion of 'demand-orders' and the subsequent paragraphs not only detailing the demand orders, but also the different types of demand orders – each one of these meets the claimed limitation of accessing a demand value, since the orders are values stored in the system (e.g. each order contains a quantity to be produced).

7. The applicant argues that Koski does not teach allowing the customer to reschedule part of the demand.

The examiner respectfully disagrees.

Koski teaches determining if there is a demand-capacity mismatch in column 22 line 48-50. Line 55 notes that a response is communicated (i.e. automatically since the cubeworld program is determining the resource availability in near-real time) – see also column 23 line 6-7 where it is noted that resource availability is constantly being evaluated, because, as noted above, the production environment is always changing. Column 22 line 55-60 notes that the customer is provided with alternative schedules. This clearly provides for the customer to reassign the demand since the customer has to select one of the schedules in order for the demand-supply mismatch to be resolved.

8. The applicant argues that Koski does not teach an automatic notification when a demand value exceeds a capacity value.

The examiner respectfully disagrees.

Koski's cube program is constant running to evaluation when supply demand mismatches occur and is performing this function in near real time. Koski teaches that an automatic notification is provided by way of report when a user logs in (see column 20 line 25-30) and also in generating (automatically since it is done as part of the computer program evaluation) a notification when there is a problem. Koski's teaching, as discussed above, is in resolving the problem between customer orders and production and resource capacities that vary during execution. The main thrust of Koski's teaching, what his invention is resolving, is the issue surrounding how variation in production affects the ability of production to efficiently schedule customer orders given this variation (see column 23 line 5-15).

9. The applicant argues that Koski does not teach allowing a user to reassign the demand-capacity mismatch to another factory or another supplier.

The examiner respectfully disagrees.

Koski's teachings include the reassignment of demand within a facility where there is a demand capacity mismatch – this concept has been clearly laid out above in Koski's cube world program for reassigning demand-capacity mismatches. Koski also teaches that the cube-world may include other suppliers (i.e. factories) and customers. See column 13 line 60-65, note that Koski details that the cube world may be expanded so that "each cube world [i.e. the resource/workplace/schedule definition in a manufacturing context] is defined

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large enough so that its boundaries encompass all possible alternatives to fill orders". This would include the fulfillment of orders using suppliers and other factories as an obvious modification of Koski.

10. The applicant argues that Koski and Official Notice fail to meet the limitations of Claim 12, however this argument is moot in view of new grounds of rejection.

11. The applicant argues that Koski does not teach the limitations of Claim 14. The examiner respectfully disagrees.

Koski teaches a cube world, where resources, workspaces and scheduling are represented by a three-dimensional axes. The three axis representation taught by Koski is a type of tree structure in three dimensions comprising a first axis (column 6 line 54-56) that describes workspaces; a second axis (column 6 line 57-60) that comprises all resources; and a third axis (column 6 line 61-65) that comprises the scheduling. The cubeview program provides a dynamic picture (i.e. display) of shop floor activity.

12. The applicants argue that there is no motivation to combine Koski and Debusk.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be

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established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Koski teaches a tree structure that meets the limitations of the claim. While Koski does not show in his specification a computer display of a tree structure, Debusk does illustrate a tree structure used in tracking medical supplies. One of ordinary skill in the art would seek to gain the advantages that Debusk teaches by showing a graphical illustration of the large number of medical supplies in order to organize the complex information.

### ***Claim Rejections - 35 USC § 112***

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. **Claims 1-48** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding **Claim 1**, the limitation "allowing the customer" does not positively recite the limitations that follow which specify what the customer is allowed to do. It is not clear that, for example, the customer is actually

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reassigning customer orders to resolve a capacity-demand mismatch, because the customer is not actually recited as performing the reassignment, but is rather 'allowed' to perform the reassignment. Therefore the claim is indefinite.

***Claim Rejections - 35 USC § 103***

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. Claims 1-11, 13, 15-25, 27, 29-39, 41, and 43-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koski US 5,596,502

Regarding **Claim 1**, Koski discloses:

**accessing an assignment of an item used in producing a product for a customer to a first resource of a factory, associated with a supplier in a first production period;**

column 12 line 5-9, orders coming into the system from the customer cause the system to access assignment of the features (i.e. item) into various resources of the factory (i.e. including a first resource) in a first production period –see column 12 line 35-36, factory resources are scheduled. (i.e. for a first production period)



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column 13 line 65-67, the cube world of Koski can extend to suppliers, that is, suppliers can have the same visibility to the resource/workplace/schedule tool to schedule production.

**accessing a capacity value representing a capacity of the first resource to process one or more items in the first production period;**

column 12 line 24-27, determination of a path through the factory comprise accessing all the capacity values associated with resources necessary to produce the feature set. –column 12 line 35-36, these resources are scheduled (i.e. for a first production period)

**accessing a demand value representing a demand placed on the first resource in the first production period by the assignment of the item to the first resource;**

column 12 line 16-19, the system accesses a demand value to determine if resources are available to meet the demand for features (i.e. items) by accessing the customer order –column 12 line 35-36 the demand is scheduled (i.e. scheduled into the first production period).

**If a demand-capacity mismatch exists with respect to the first resource in that the demand value exceeds the capacity value; automatically generating a notification of the demand-capacity mismatch if the demand value exceeds the capacity value;**

column 12 line 51-55, a rich response is generated if the resources in the factory cannot meet the demand (i.e. demand value exceeds capacity value) for

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the time period requested by the customer order. – see also column 22 line 47-52.

**automatically communicating the notification to a user associated with the customer; and**

column 12 line 51-55, this response is communicated to the customer by the system automatically – see column 12 line 47-50.

Column 22 line 54-59, a notification to the user is provided that provides alternative quantities of product and schedule, where this rescheduling occurs because of a demand capacity mismatch.

**And allowing the user associated with the customer to reassign at least a portion of the demand placed on the first resource in the first production period to at least one of a second resource and a second production period.**

column 12 line 53-55, the response to the customer includes a alternative delivery date which includes reassigning the original demand on production resources in the first time period to other resources in later time periods (i.e. second time period).

Koski teaches that there is a need to dynamically schedule resources in an environment where production schedules can dramatically change (column 2 line 27-30). Koski teaches that there is a need to provide production capacity that is dynamically allocated and scheduled in such a way as to meet customer demand for utilization of that capacity.

Koski further teaches that resources are a required input into the scheduling of production in manufacturing. These inputs are workspaces, i.e. the location a particular manufacturing step will be performed (see column 6 line 53-56); resources, i.e. the persons, tooling and raw material required; and the timing with which the first two are scheduled.

Koski further teaches communicating back to the customer when the real time scheduling dynamic cannot meet the customer demand (column 12 line 10-12). Koski teaches contacting the customer to provide an alternative to their initial requested demand (column 12 line 14-16). Koski teaches communicating alternatives back to the customer, including alternative time periods and alternative resources. The alternative resources and workspaces include those that are either internal to the organization or can extend to suppliers (see column 13 line 66-67). Koski also suggests that his model for managing, resource/workplace/schedule (i.e. the cube-space) can also extend to include other customers.

Koski teaches that alternative schedules and assignments of the resources as described in the cube space may be offered to customers. Koski teaches that the customer selects one of the alternative schedules since the alternatives are being presented to the customer (see column 22 line 55-60). While Koski does not explicitly teach allowing the customer to reassign a portion

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or all of the demand to another factory or supplier, Koski does teach that his invention may be expanded to include both suppliers and customers (see column 13 line 64-67). It is old and well known in the art to involve both customers and suppliers in the planning process for satisfying customer demand.

Since Koski addresses rescheduling demand and including customer input into that demand, it would have been obvious to one of ordinary skill in the art at the time of the invention to have the customer reschedule the demand into another factory or supplier as per:

**if the demand-capacity mismatch cannot be fully resolved as a result of reassignment of at least a portion of the demand placed on the first resource of the factory to at least one of a second resource of the same factory allowing the user associated with the customer to reassign at least a portion of the demand to another factory to attempt to resolve the demand-capacity mismatch; and**

**if the demand-capacity mismatch cannot be fully resolved as a result of reassignment of at least a portion of the demand placed on the second resource of the factory to another factory allowing the user associated with the customer to reassign at least a portion of the demand to another supplier to attempt to resolve the demand-capacity mismatch;**

because it would allow the customer demand to be met by providing the a way for the customer to reschedule their own demand, since the customer, as

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well as suppliers (including other factories) is connected to the resource/workspace/schedule cube world taught by Koski.

Regarding **Claim 2**, Koski discloses:

**wherein reassigning at least a portion of the demand comprises allowing the user associated with the customer to reassign at least a portion of the demand.**

column 20 line 53-56, the customer is contacted directly to reassign their demand into resources that are available to ensure the order (i.e. portion of the demand) can be delivered later. The contact includes the customer agreeing to the reassignment.

Regarding **Claim 3**, Koski discloses:

**the notification is also automatically communicated to at least one of a user associated with the factory and a user associated with a supplier;**

column 20 line 53-55, the customer order department (i.e. a user associated with the factory) is contacted automatically regarding inability to meet the customer order as requested.

column 13 line 51-56, The notifications provided when internal capacity cannot be met (when orders are considered endogenous to a parent company and its subsidiaries) are automatically communicated to an internal customer.

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Since the internal customer, the supplier and manufacturer are all part of the same organization, the notification is automatically provided to a user associated with all these at the same time.

**the reassignment is initiated by at least one of the user associated with the factory and the user associated with the supplier, respectively;**

column 12 line 64-65, a technician (i.e. user associated with the factory or with the parent organization as discussed above in column 13 line 51-56) can monitor the status of an order regarding resource-demand mismatches and reassignment of resources – see column 18 line 56-58, the system displays resource contentions (i.e. demand capacity mismatches) in red.

**the reassignment is to a second resource in the same factory if initiated by the user associated with the factory; and**

**the reassignment is to a second resource in another factory if initiated by the user associated with the supplier.**

The user mentioned in column 12 line 64-65 can reassign to a second resource in the same factory or another factory, since the cube world in the invention comprises an, column 13 line 48-51, organization consisting of several plants of which some may be vendors (i.e. suppliers). – see column 13 line 60-65, the cube world may encompass a parent and several child cubes (i.e. suppliers or vendors). Also a user, if associated with an internal order, is associated with the supplier and customer at the same time.

Regarding **Claim 4**, Koski discloses:

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**allowing the user associated with the customer to reassign at least a portion of the demand to another supplier if a reassignment by the user associated with the factory and a reassignment by the user associated with the supplier would both fail to resolve a demand-capacity mismatch associated with the assignment of the item to the first resource.**

column 13 line 51-55, since in a larger organization some orders are endogenous, that is they originate from within the cube-world system, the customer users having access to the system would access the system as described in claim 3 above to reassign demand should the user associated with the factory and user associated with the vendor (all inside the cube world) fail to remedy a demand-capacity mismatch by reassignment.

Regarding **Claim 5**, Koski discloses:

**wherein the demand value reflects a factoring value associated with processing the item using the first resource, the demand value equaling the factoring value multiplied by a nominal demand value representing a demand that would be placed on the first resource in processing a standard item.**

column 20 line 3-7, demand values are weighted (i.e. multiplied by a factoring value) depending on the path through the factory and thus reflect a factoring value associated with processing the item – i.e. the various manufacturing paths (i.e. for processing) are ranked using the factoring value to

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account for costs, 'hassle factor' and customer service— see also column 21 line 18-21, some paths may require additional quantities of certain resources.

Regarding **Claim 6**, Koski discloses:

**storing a requested capacity value representing a capacity of the first resource requested by the customer;**

column 11 line 52-54, the second memory provides for storage of requested capacity demand (i.e. value) by the customer—see also column 12 line 7-9.

**storing a committed capacity value representing a capacity of the first resource that at least one of a user associated with the factory and a user associated with a supplier agrees to provide the customer; and**

column 12 line 47-50, if sufficient resources exist, the customer is informed that their demand can be met, i.e. the committed capacity is booked (i.e. stored in memory) to that customer to ensure that their demand can be met. This value is associated with at a user associated with the factory--see column 13 line 42-46.

**generating a notification when the requested capacity value is different than the committed capacity value.**

column 12 line 47-55, a rich response to the customer (i.e. notification) is provided if the requested capacity value is different than the committed capacity value. If the customer requests a delivery commitment based on available factory resources and those resources are not available (i.e. the requested



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capacity value is different than the current committed capacity value), a notification is automatically generated.

Regarding **Claim 7**, Koski discloses:

**storing a contracted capacity value representing a maximum capacity of the first resource that the customer is allowed to request, and generating a notification when the requested capacity value exceeds the contracted capacity value.**

column 18 line 35-38, as discussed above, Koski provides storing capacity values of requested versus available resources for comparing demand values for customer order (i.e. resources) to the resources to allocate resources to those orders. Fixed resources are those which demand from customer orders cannot exceed and comprise a maximum the customer can request. If a customer order exceeds the available capacity of fixed resources, a notification is generated.

Regarding **Claim 8**, Koski discloses:

**storing an estimated capacity value representing an estimated capacity of the resource made by the customer; and generating a notification when the capacity value is different than the estimated capacity value.**

column 18 line 53-56, the cube world stores a calculation (i.e. estimated value) of the demand and resource values and automatically generates a notification when the demand and resource values are different.

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Regarding **Claim 9**, Koski discloses:

**generating a notification when the capacity value exceeds the demand value.**

column 12 line 47-50, the system sends a rich response (i.e. notification) to the customer if the capacity value exceeds the demand value, i.e. the customer demand can be met.

Regarding **Claim 10**, Koski discloses:

**wherein the first and second resources are associated with different factories.**

column 13 line 49-51, the resources in the cube world (i.e. first and second resources) can be more than one physical location (i.e. different factories).

Regarding **Claim 11**, Koski discloses:

**wherein the first and second resources are associated with different suppliers.**

column 13 line 49-51, the resources in the cube world (i.e. first and second resources) can be more than one vendor (i.e. different suppliers).

Regarding **Claim 13**, Koski discloses:

**wherein at least one additional resource is associated with the factory, the additional resource operable to receive and process a second item from the first resource, the method further comprising:**

column 17 line 58-60, production equipment are resources (e.g. first production equipment, second production equipment) operable to receive and process a second item from a first resource –see Figure 2b.

**storing a demand value associated with the additional resource, the demand value for the at least one additional resource based at least partially on the demand value for the first resource; and**

column 57-59, data associated with demand values associated with additional resources (as required for the ‘best path’ calculation) are stored. Since the cube world invention is storing values for a path, there is at least one additional resource whose capacity and assignment are stored in memory.

**propagating a change in the demand value for the first resource to the demand value for the additional resource, the change in the demand value for the first resource resulting in a change in the demand value for the additional resource.**

column 13 line 2 line 9, the cube world breaks down demand value into a series of process steps (e.g. ‘best path) so that changes in demand value for a first resource are propagated throughout the process to subsequent resources allocated to address the demand.

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**Claims 15-25, 27, 29-39, 41, 43-48** recite similar limitations as those recited in **Claims 1-11 and 13** above, and are therefore rejected under the same rationale.

17. **Claims 12, 26 and 40** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koski US 5,596,502** in view of **Lidow US 6,889,197** (hereinafter **Lidow**).

Regarding **Claim 12**, Koski teaches:

making the assignment, the capacity value, the demand value and the notification available to a user associated with the factory – as discussed above.

Koski teaches his invention being accessed through a personal computer and a network – see Figure 1.

Koski does not teach:

**storing at least one access privilege, the access privilege capable of allowing the user associated with the customer to view at least a portion of the supplier and factory supply chain based on the access privilege;**

Lidow teaches:

**storing at least one access privilege, the access privilege capable of allowing the user associated with the customer to view at least a portion of the supplier and factory supply chain based on the access privilege;**

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column 27 line 33-37, the secure extranet provides access to order and forecast information (i.e. at least a portion of the supply chain) – this is based on site membership and security (i.e. access privilege).

Lidow and Koski both address operational scheduling to satisfy customer demand, thus both Lidow and Koski are analogous art.

Lidow teaches that providing access privilege enables the secure flow of information to and from the server (column 27 line 40-43).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Koski, regarding providing resource capacity and demand allocation on a computer network, to include the step of providing security access to said network, because it would ensure that users who want to access the system have the proper clearance through enabling the secure flow of information to and from the server.

**Claims 26 and 40** recite similar limitations as those recited in **Claim 12** above, and are therefore rejected under the same rationale.

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18. **Claims 14, 28 and 42** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Koski US 5,596,502** in view of **DeBusk US 5,991,728**.

Regarding **Claim 14**, Koski teaches a cube world, where resources, workspaces and scheduling. The three axis representation taught by Koski is a type of tree structure in three dimensions comprising a first axis (column 6 line 54-56) that describes workspaces; a second axis (column 6 line 57-60) that comprises all resources; and a third axis (column 6 line 61-65) that comprises the scheduling. The cubeview program provides a dynamic picture (i.e. display) of shop floor activity.

**Providing a tree structure to a display of the user associated with at least one of the customer, the factory, and the supplier,**

column 6 line 54-56, Koski teaches that the cubeworld provides a dynamic display of the three dimensions of resources/workspaces/schedule. This is provided to the factory

**the tree structure comprising the first resource of the factory being used to produce the product for the customer,**

Column 6 line 57-60, the second axis of the tree structure provides the resource being used to produce the product for the customer.

**the at least one additional resource of the factory being used to produce the product for the customer,**

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Column 6 line 57-60, all additional resources (including at least one additional) that are being used to produce product for the customer.

**the capacity of each resource available to the customer,**

column 6 line 57-50, the availability (i.e. available capacity) of the second axis that describes resources, lists the capacity of each resource available to the customer.

**and at least the demand values that are currently placed on each resource associated with the production of the product for the customer.**

Column 14 line 5-10, the cube system provides a three dimensional representation of supply and demand (i.e. the demand values for each of the resources).

While Koski teaches the above limitations, Koski does not explicitly show a computer display of a tree structure

DeBusk teaches providing a tree structure in a computer display:

column 15 line 46-53, a nested diagram (i.e. tree structure) is provided to the user in a display. This tree structure lists a first resource of medical supplies used for a particular operation. The quantities of each type of resource is listed along with sub-bundles – see also Figures 8 and 9. The first and additional resources and demand values are displayed to identify what is needed for a medical procedure. See also column 9 line 20-25, the display of the nested procedure provides a way to easily organize the complex information.

DeBusk and Koski both address tracking resources utilized to fulfill customer demand, thus both DeBusk and Koski are analogous art.

DeBusk teaches that providing nested grouping of resources required for a customer provide a standardization that ultimately results in lower inventory carrying costs (column 5 line 25-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Koski, regarding providing resource and capacity planning to include the step of displaying a tree structure containing resource demands to allocate resources in a standardized way to fulfill customer orders, because enable the user to easily organize the complex information associated with fulfilling a customer order.

**Claims 28 and 42** recite similar limitations as those recited in **Claim 14** above, and are therefore rejected under the same rationale

### ***Conclusion***

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



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"Motorola licenses i2 Technologies' Rhythm® Suite of Supply Chain Planning Solutions", i2.com webpage from web.archive.org, Jan 31, 1998, pp.1-2.

"i2 Announces the inception of a new business super portal at Planet 99: The high velocity business summit", i2.com webpage from web.archive.org, January 23, 2000, pp.1-3

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair->

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